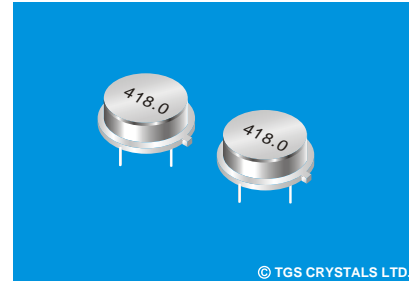


FEATURES

- The SR418-T is a true one-port, Surface-acoustic-wave(SAW) resonator in a low-profile, TO-39 case. It provides reliable, fundamental-mode, quartz frequency stabilization of fixed-frequency transmitters operating at 418.0MHz.

APPLICATIONS

- Remote Control



© TGS CRYSTALS LTD.

SPECIFICATION \*

Parameters		Product	Option Code
		SR	SR
Centre Frequency( $f_c$ ) :	418.000MHz	▲	418.000
Frequency Tolerance( $\Delta f_c$ ):	$\pm 75$ KHz	△	A
	$\pm 100$ KHz	△	B
	$\pm 150$ KHz	△	C
	$\pm 200$ KHz	△	D
Temp. Stability	Turnover Temp( $T_o$ ): $55^\circ\text{C}$ Max.	▲	
	Turnover Frequency( $f_o$ ): $f_c$ 418.0 MHz	▲	
	Frequency Temp. Coefficient (FTC): $0.037$ ppm/ $^\circ\text{C}^2$	▲	
Insertion Loss(IL):	2.2 dB Max.	▲	
Operating Temp. Range:	$-10^\circ\text{C} \sim +60^\circ\text{C}$	▲	
Storage Temp. Range:	$-40^\circ\text{C} \sim +85^\circ\text{C}$	▲	
Quality Factor	Unloaded Q( $Q_u$ ): 12,500	▲	
	$50\ \Omega$ Loaded Q( $Q_L$ ): 2,000	▲	
DC Insulation Resistance between Any Two Pins:	$1.0\text{M}\ \Omega$ Min.	▲	
Frequency Aging Absolute Value During the First Year( $f_A$ ):	$\leq 10$ ppm/year	▲	
RF Equivalent RLC Model	Motional Resistance( $R_m$ ): $29\ \Omega$ Max.	▲	
	Motional Inductance( $L_m$ ): $90.665\ \mu\text{H}$	▲	
	Motional Capacitance( $C_m$ ): $1.6006\ \text{fF}$	▲	
	Shunt Static Capacitance ( $C_o$ ): $1.8\ \text{pF}$	▲	
CW Therefore Power Dissipation:	$+10\text{dBm}$	▲	
DC Voltage Between Any Two Pins:	$\pm 30\text{V}$ DC	▲	
Case Temperature:	$-40^\circ\text{C} \sim +85^\circ\text{C}$	▲	
Holder Type:	TO-39	△	T
Package:	Tube	△	U

▲ Standard \* Specifications Subject to Change Without Notice  
 △ Optional: please specify required code when inquiring or ordering

NOTE

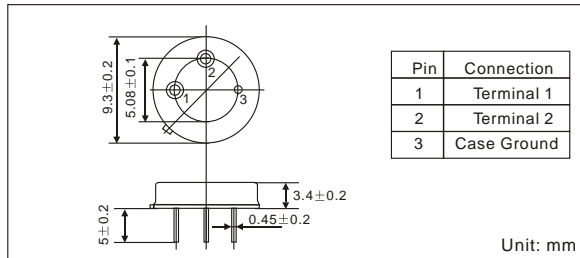
1. Electrostatic Sensitive Device. Observe precautions for handling
2. Freq. Aging is the change in  $f_c$  with time and is specified at  $+65^\circ\text{C}$  or less. Aging may exceed the specification for prolonged temp. Above  $+65^\circ\text{C}$ . Typically, aging is greatest the first year after manufacture, decreasing in subsequent years.
3. The centre freq.  $f_c$ , is the freq. Of minimum IL with te resonator in te specified test fixture in a  $50\ \Omega$  test system with  $VSWR \leq 1.2:1$ . Typically,  $f_{oscillator}$  or  $f_{transmitter}$  is less than the resonator  $f_c$ .
4. Typically, equipment utilizing this device requires emissions testing and government approval. Which s the responsibility of the equipment manufacturer
5. Unless noted otherwise , case temperature  $T_c = +25^\circ\text{C} \pm 2^\circ\text{C}$ .
6. The design, manufacturing process, and specifications of this device are subject to change without notice.
7. Derived mathematically from one or more of the following directly measured parameters:  $f_c$ , IL, 3 dB bandwidth,  $f_c$  versus  $T_c$  , and  $C_o$
8. Turnover temperature,  $T_o$ , is the temperature of maximum (or turnover) freq.,  $f_o$ . The nominal center freq, at any case temp. ,  $T_c$ , may be calculated from : $f = f_o [1 - FTC (T_c - T_o)^2]$ . Typically, oscillator  $T_o$  is  $20^\circ\text{C}$  less than the specified resonator  $T_o$ .

PART NUMBER GUIDE

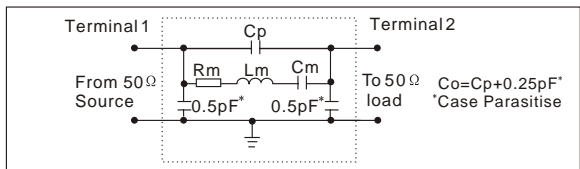
TGS	SR	418	A	T	U
Mark	SAW Resonators One-Port	Centre Freq.	Frequency Tolerance	Holder Type	Package

e.g. TGS SR 418.0 A T U

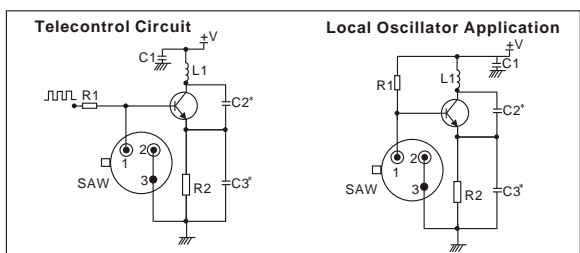
DIMENSIONS



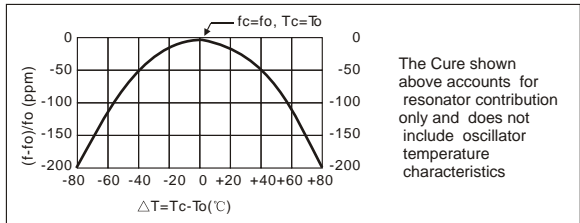
EQUIVALENT LC MODE



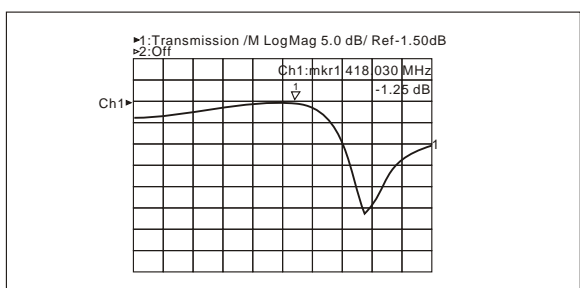
TYPICAL APPLICATION CIRCUIT



TEMPERATURE CHARACTERISTICS



TYPICAL FREQUENCY RESPONSE



PACKAGE

- Standard package in Tube: 20pcs/Tube.

